**PROJECT DEFINITION DOCUMENT**

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GENERAL PROJECT INFORMATION

| PROJECT NAME | PROJECT MANAGER |  |
| --- | --- | --- |
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PROJECT SUMMARY

| Project Summary | ÖneriRobotu is an ML-powered recommendation assistant designed to provide personalized suggestions for movies, TV shows. The system gathers user preferences through interactions, surveys, and past behaviors, then uses machine learning algorithms to generate tailored recommendations. This project aims to solve the problem of information overload by offering curated entertainment options that align with individual tastes. By leveraging content-based and collaborative filtering techniques, ÖneriRobotu ensures that users receive high-quality and relevant recommendations efficiently. |
| --- | --- |

OBJECTIVES

| Data Collection | Develop a data collection pipeline using available csv’s to gather movie data. |
| --- | --- |
| User Profiling | Implement user profile management, allowing users to save preferences and interaction history. |
| Machine Learning | Design a machine learning-based recommendation system using content-based filtering, collaborative filtering, or hybrid approaches. |
| User Interface | Develop a responsive UI/UX for users to interact with recommendations easily. |
| Real-time Adaptations | Provide real-time, personalized suggestions based on changing user behaviors. |
| Data Storage | Ensure backend functionality for authentication, data storage, and API-based recommendation retrieval. |

PROJECT SCOPE

| WITHIN  SCOPE | * Machine learning-based personalized recommendation system. * Interactive and responsive UI/UX. * Backend development for storing and processing data. * Real-time updates to recommendations based on user activity. |
| --- | --- |
| OUTSIDE  OF SCOPE | * Multi-language support in the initial phase. * Integration with social media for external recommendations. * Live streaming or direct content consumption within the app. * Advertisements. * AI-powered chatbot that interacts with users via natural language queries. * Multi-Platform (iOS & Desktop) Native Apps * Cross-Platform Recommendation Syncing |

TARGET AUDIENCE

| Movie Gourmets | Searching for new films/TV shows based on their interests. |
| --- | --- |

KEY FEATURES

| User Profile Creation & Preference Tracking | Users can set up profiles and update preferences over time. |
| --- | --- |
| ML-Powered Recommendation System | Content-based, collaborative, or hybrid filtering techniques to provide personalized suggestions. |
| Real-Time Adaptive Recommendations | The system updates recommendations dynamically based on user interactions. |
| Intuitive & Responsive UI/UX | A clean interface for viewing and interacting with recommendations. |
| Search & Filter Options | Users can explore recommendations based on genres, release dates, ratings, etc. |
| Backend API for Data Management | Secure authentication, recommendation retrieval, and storage. |

DELIVERABLES

| We aim to deliver: | * Project Documentation * Machine Learning Model for Recommendations * Frontend UI/UX with Full User Interaction Capabilities * Backend System & Database Setup |
| --- | --- |

RESOURCES

| Team Members (Human Resources) | * Software Developers (2) – Backend, Frontend, API integration * Data Scientist / ML Engineer (2) – Machine Learning-based recommendation system * UI/UX Designer (1 person) – Designing a user-friendly interface * Project Manager (1 person, rotating role) – Organizing tasks and tracking progress |
| --- | --- |
| Software Tools & Technologies | * Programming Languages: Python (Backend & ML) * Database: MySQL (Free version) * Machine Learning Libraries |
| Hardware & Infrastructure | * Personal Laptops – No additional hardware is required since we will use our own computers. |
| Learning Resources | * Google Machine Learning Crash Course * YouTube tutorials * Kaggle datasets and tutorials for recommender systems |

TIME ESTIMATE

| Development Time | 4 - 6 Weeks. |
| --- | --- |

Budget

| Target Budget: ₺0 | We will prioritize free and student-discounted services to keep costs as low as possible while ensuring the project is fully functional. |
| --- | --- |

Risks and Mitigation Strategies

|  | Risks | How to Address Them |
| --- | --- | --- |
|  | * Machine learning model accuracy issues | * Tune hyperparameters, collect diverse training data |
|  | | * UI/UX adoption issues | | --- |  |  | | --- | | |  | | --- |  | * Conduct user testing, iterate based on feedback | | --- | |
|  | * Unexpected deployment issues | * Perform staged deployments, use monitoring tools |

Success Criteria

| Relevant Recommendations | 80% of users report finding relevant recommendations. |
| --- | --- |
| Functionality | At least 5 key features are fully implemented and functional. |
| User Engagement | Users engage with recommendations by marking them as watched/read/played. |

| PREPARED BY | TITLE | DATE |
| --- | --- | --- |
| Sencer Ali Sahin  Mete Oktar | Project Contributors | 28.02.2025 |

Task Matrix

|  |  | Mete Oktar | Sencer Ali Şahin |
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